

IN THE DRAWINGS:

The two attached sheets of drawings includes changes to Figures 2 and 4. The first sheet, which includes Figures 1 and 2, replaces the original sheet including Figures 1 and 2. In Figure 2, the reference number "17" has been added in accordance with the disclosure. The second sheet, which includes Figures 3 and 4, replaces the original sheet including Figures 3 and 4. In Figure 4, an incorrectly marked reference number "12" has been changed to correctly indicate the target portion "C".

Attachments: Two (2) Replacement Sheets

REMARKS

By this Amendment, claims 1, 5, 10, 11, 12, and 14 are amended. After entry of this amendment, claims 1-16 will remain pending in the patent application. Reconsideration and allowance of the present patent application based on the foregoing amendments and following remarks are respectfully requested.

Claims 1, 5, 11, and 14 were amended only to correct typographical errors and clarify the recited subject matter without the intention of narrowing or otherwise changing the scope of the claims or in response to any rejection of those claims.

Applicants appreciate the Examiner's consideration of the indicated references submitted in the PTO-1449 forms of February 20, 2004, March 30, 2004, May 6, 2004, and February 2, 2005. Applicants respectfully request, however, that the Examiner additionally consider the U.S. patent applications listed in the Information Disclosure Statement letters filed February 20, 2004 and February 2, 2005, and consider the foreign patent documents listed on page 2 of the enclosed PTO-1449 form submitted on February 2, 2005, copies of which were submitted on that date as evidenced by the enclosed copy of the stamped receipt and submitted herewith again. Applicants hereby request return of the Information Disclosure Letters and the enclosed PTO-1449 initialed to show that references listed therein have been considered.

Drawing Objections:

The drawings were objected to for various formalities. First, the Examiner stated that the "walls 17" are not shown in the drawings. Applicants have amended Figure 2 to include the reference number "17" that indicates the walls of the fluid processing unit, as described in the specification. Second, the Examiner stated that two different structures are labeled "12" in Figure 4. Applicants have amended Figure 4 to correct the erroneously identified element. Applicants therefore respectfully request that the objections to the drawings be withdrawn. No new matter has been added.

Specification Objections:

The Examiner objected to the specification for two formalities. First, the Examiner stated that reference "29" was used to describe two different elements. The specification has been amended to correct the typographical error. Second, the Examiner stated that the references "RF" and "62" in Figure 6 were not described in the specification. Applicants respectfully submit that reference 62 was described in the specification as originally filed: "In the fluid processing cell 60, the fluid chambers 62 are formed between a plate member 61...and the substrate W" (page 12, lines 12-17). Additionally, that paragraph has been

amended to correct a typographical error in a further reference to the fluid chambers 62. Regarding the reference “RF,” the specification has been amended to correctly refer to the fluid. Applicants therefore respectfully request that the objections to the specification be withdrawn. No new matter has been added.

Claim Objections:

The Examiner objected to claims 1, 11, 14, and 16 because “[t]he structure of ‘target portion of the substrate’ is unclear because Fig. 2 seems to indicate that target portion C is a section of the fluid chamber 11.” Applicants respectfully submit that the respective language of each of claims 1, 11, 14, and 16 is clear.

The term “target portion” alone, as used in the specification, is not specific to any one of a substrate, a fluid chamber, or a layer of radiation-sensitive material. A target portion is simply a location at which a patterned beam of radiation is projected upon an object, as described in the specification at least at page 1, lines 6-17. As such, any element upon which the radiation is projected may have a target portion. The reference character “C” in the specification is used to refer to this generic concept of a target portion and therefore has no intrinsic specificity to any one of the substrate, the fluid chamber, or the radiation-sensitive material. In Figures 2 and amended Figure 4, the character C refers to a location or locations at which the radiation is projected and is not intended to be associated only with the fluid chambers.

Thus, in claims 1 and 14, “a target portion of the substrate” refers to that portion of the substrate onto which the patterned beam is projected. In claims 11 and 16, the “target portion of a layer of radiation-sensitive material” likewise refers to that portion of the radiation-sensitive material onto which the patterned beam is projected. Applicants therefore submit that the language in claims 1, 11, 14, and 16 is clear and respectfully request that the objections to the claims be withdrawn.

Claim Rejections:

Claims 1-13 and 16 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. The rejection is respectfully traversed.

With respect to claims 1, 11, and 16, the Examiner stated that “the simultaneous or partially simultaneous exposure/projecting and fluid processing is not adequately disclosed in the specification.” The Examiner further stated that “[t]he sequence of whether the exposure or projection took place first or at the same time as the fluid processing is not fully disclosed.” Applicants respectfully submit that simultaneous or partially simultaneous processing is

adequately described and enabled and the particular sequence of processing is not relevant for present purposes. Indeed, the specification discloses that

[t]he fluid processing cell provided on the substrate table enables processes to be carried out on the substrate, before during and after an exposure without removing the substrate from the apparatus....Multiple separate chambers in the flowcell enable fluid processes to be carried out in parallel with exposures, increasing throughput....A fluid processing may be carried out before an exposure, *e.g.* to prime a layer of the substrate or deposit a radiation sensitive layer, during an exposure, *e.g.* to perform a reaction catalyzed by radiation, or after an exposure, *e.g.* to react selectively to parts of the target portion sensitized by the exposure radiation.

See Specification, page 2, line 23 through page 3, line 7. It is thus clear that the present invention pertains to an apparatus and method for effectuating multiple fluid or exposure processes at least partially simultaneously and is not limited to any singular lithographic method. One of skill in the art would, depending upon the specific application for which the apparatus is being used, decide on a preferred constitution and sequence of steps in the method.

The claims recite that different processes or projections/exposures are carried out (or are capable of being carried out) simultaneously or partially simultaneously. As such, and without acknowledgement of a lack of enablement with respect to anything else, there is sufficient enablement for the claimed subject matter as long as the specification discloses such a method or an apparatus having such a capability. As mentioned above, the specification provides for such a method and apparatus; the planning of the specific order of the steps of projecting and/or processing is within the expertise of one of skill in the art and depends upon the particulars of the task at hand.

With respect to claim 11, the Examiner further stated that "the processing of an area exposed to fluid but does not include the target portion is not adequately described in the specification." Applicants respectfully submit that the limitation is adequately described in the specification, at least by the cited portions of the specification above. In addition, the specification provides:

Where the fluid processing unit has several fluid chambers, various arrangements are possible. Most simply, all the fluid chambers may be connected in parallel so that the same liquid is supplied to them all at the same time. It may however be desirable to be able to supply fluids to the chambers separately, *e.g.* to apply different processes to different ones of the target areas or *to allow fluid processing to occur in parallel with exposures*. In that case, a switching arrangement may be provided in the fluid processing unit to control delivery of fluids from a single supply conduit to selected ones of the fluid chambers. Alternatively, several fluid management systems, one for each fluid

chamber, may be provided. This provides maximum flexibility at the cost of requiring additional supply and exhaust lines to be provided to the table.

See Specification, page 11, lines 3-12 (emphasis added). Thus, the specification sufficiently describes the claimed limitations. Applicants therefore respectfully request withdrawal of the rejections of claims 1-13 and 16 under 35 U.S.C. § 112, first paragraph.

Claims 1-16 were rejected under 35 U.S.C. § 102(b) based on Garner (U.S. Patent Application Publication No. US 2002/0041420 A1). The rejection is respectfully traversed.

Regarding claim 1, Garner does not disclose, teach, or suggest a lithographic projection apparatus comprising, *inter alia*, “a fluid processing cell in fluid communication with a surface of a substrate held on the substrate table, wherein a fluid can be brought into contact with the substrate so as to interact with the target portion, the fluid processing cell comprises a plurality of separate chambers in fluid communication with respective areas of a substrate held on the substrate table, and different areas of the substrate may be subjected to different fluid or exposure processes simultaneously.” Claim 1 is therefore patentable over Garner.

Garner discloses an optical micromirror imager in which any of a variety of reagents (ref. 46 in Figure 3 of Garner) may be supplied to a reaction chamber (50) to be exposed to light (14). While a plurality of bottles are disclosed in the fluidics system (36) that supplies fluid to the single reaction chamber (50), the system of Garner does not disclose, teach, or suggest, a plurality of separate chambers in fluid communication with respective areas of a substrate and different areas of the substrate subjected to different fluid or exposure processes simultaneously. There is no mechanism or method disclosed by Garner by which different fluid or exposure processes may be carried out at different areas of the substrate. Therefore, claim 1 is patentable over Garner.

Claims 2-10 depend from claim 1 and are therefore patentable for at least the same reasons provided above and for the additional features recited therein.

Regarding claim 11, Garner does not disclose, teach, or suggest a device manufacturing method comprising, *inter alia*, processing an area of a substrate by exposing it to a fluid that interacts therewith, wherein the area of the substrate does not include the target portion and the projecting and processing are carried out at least partially simultaneously. There is simply no discussion in Garner disclosing, teaching, or suggesting exposing an area of a substrate to an interacting fluid while, at least partially simultaneously, projecting a patterned beam of radiation onto a target portion of a layer of radiation-sensitive material, wherein the area does not include the target portion. Garner merely discloses exposing and fluid processing the same area of the substrate. Claim 11 is therefore patentable over Garner.

Claims 12 and 13 depend from claim 11 and are therefore patentable for at least the same reasons provided above and for the additional features recited therein.

Regarding claim 14, Garner does not disclose, teach, or suggest a fluid processing cell comprising a plurality of separate chambers that are in fluid communication with *respective* areas of the substrate. Garner discloses a plurality of chemical bottles (46) but they are only in communication with the reaction chamber (50) by means of a single fluid inlet (48), and thus a single area of the substrate and not *respective* areas of the substrate. Therefore, claim 14 is patentable over Garner.

Claim 15 depends from claim 14 and is therefore patentable for at least the same reasons provided above and for the additional features recited therein.

Regarding claim 16, Garner does not disclose, teach, or suggest a device manufacturing method comprising, *inter alia*, processing an area of a substrate by exposing it to a fluid that interacts therewith, the area of the substrate not including the target portion, wherein the projecting and the processing steps are carried out at least partially simultaneously. As similarly discussed above with respect to claim 11, Garner does not disclose, teach, or suggest this limitation. Claim 16 is therefore patentable over Garner.

Accordingly, reconsideration and withdrawal of the rejection of claims 1-16 under 35 U.S.C. § 102(b) based on Garner are respectfully requested.

Applicants have addressed all the Examiner's rejections and objections and respectfully submit that the application is in condition for allowance. A notice to that effect is earnestly solicited. If any point remains in issue which the Examiner feels may be best resolved through a personal or telephone interview, please contact the undersigned at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,
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